CLAIMS:

1. A laser source comprising:

a laser medium having a back facet and a front surface, whereby the laser medium is adapted to emit a laser beam through the front surface into an external cavity defined in length by a cavity end mirror reflecting the laser beam back towards the laser medium, and

a wavelength tunable filter arranged between the laser medium and the cavity end mirror adapted for tuning the wavelength of the laser beam,

wherein the laser medium, the wavelength tunable filter, and the cavity end mirror are arranged in a spatially linear cavity structure substantially in a line without angular redirection of the laser beam in the cavity between the laser medium and the cavity end mirror,

at least one portion of the laser beam within the cavity after passing the wavelength tunable filter and before again passing the laser medium is coupled out as an output beam of the laser source, and

the cavity end mirror is provided to be partly transparent for coupling out a first output beam.

2. The laser source of claim 1, wherein a beam splitter is provided between the wavelength tunable filter and the cavity end mirror or between the wavelength tunable filter and the laser medium for coupling out a third output beam.

3. The laser source according to claim 1, wherein the back facet of the laser medium is provided to be partly transparent, so that a portion of the laser beam within the cavity is coupled out as a second output beam of the laser source.

4. The laser source according to claim 1, wherein at least one of the laser medium or the cavity end mirror is movable in the linear direction of the spatially linear cavity structure in order to adjust the optical path length of the cavity to the wavelength tuning provided by the wavelength tunable filter.

5. The laser source of claim 4, further comprising a synchronizing unit adapted synchronizing the optical path length of the cavity with the wavelength tuning provided by the wavelength tunable filter in order to provide the laser beam to be substantially mode hop free when tuning the wavelength.

6. The laser source of claim 4, wherein at least one portion of the laser beam within the cavity after passing the wavelength tunable filter and before again passing the wavelength tunable filter is coupled out as an output beam of the laser source.

7. The laser source of claim 6, wherein the cavity end mirror is provided to be partly transparent for coupling out a first output beam.

8. The laser source of claim 6, wherein a beam splitter is provided between the wavelength tunable filter and the cavity end mirror for coupling out a third output beam.

9. The laser source according to claim 4, wherein the back facet of the laser medium is provided to be partly transparent, so that a portion of the laser beam within the cavity is coupled out as a second output beam of the laser source.